Lake Shasta Enlargement Analysis Status

CALFED conducted a pre-feasibility evaluation of Shasta Reservoir enlargement options, which was documented in "CALFED Storage and Conveyance Components, Facility Descriptions and Cost Estimates, Volume 2," dated October 1997. Through its consultant team, CALFED investigated two levels of enlargement from the existing capacity of 4.55 million acre-feet to 6.75 MAF and 14.3 MAF, respectively. The corresponding rise in maximum water surface elevation would be 63 feet for 6.75 MAF capacity and 202 feet for 14.3 MAF capacity.

Both of these enlargement increments would involve relocations of Interstate 5, the Southern Pacific Railroad line, and recreation developments along the shoreline of Shasta Lake.

In late fall of 1997 the U.S. Bureau of Reclamation decided to conduct its own pre-feasibility investigation of Lake Shasta enlargement, with particular focus on more modest lake enlargement options up to about 1.0 MAF. The corresponding rise in maximum reservoir elevation would be about 30 feet. This investigation is aimed at achieving a reasonable gain in storage based on modest modifications to the existing dam and avoiding the huge relocation expenses associated with the 6.75 and 14.3 MAF enlargements.

The USBR investigation was scheduled to be completed in the late January-February 1998 timeframe. CALFED and USBR staffs are meeting periodically to discuss progress and to assure close coordination between CALFED investigations, DWR's offstream storage investigations, and USBR's Shasta investigation.

The enlargement of Lake Shasta could be obtained by different methods:

- Changing the design of the exiting radial gates and raising them up to 20 feet could provide about 0.5 MAF at a relatively low cost.

- Building up the dam to the point where minimum changes to the freeway alignment and structures appear feasible for a 1.0 MAF additional enlargement.

- Enlarging the reservoir in large scale, which would need substantial work to relocate the freeway, railroad tracks and related structures (tunnels, bridges), as well as recreational and commercial structures.